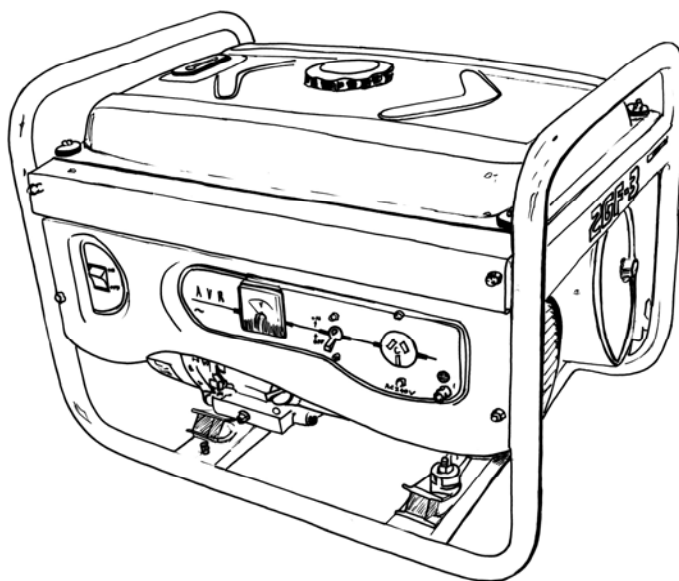




Operator's Manual

MANLBA-105 REV A 14/12/05

Selecta Power Petrol Generator Set



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New Product Warranty

WARRANTY POLICY

Silvan Australia Pty. Ltd. Warrants to its authorised dealer, who in turn warrants to the original purchaser (owner) of each new Silvan product, that it will repair or replace, without charge for labour or parts, any defective or malfunctioning parts in accordance with the warranty limitations and adjustments schedule below.

PRODUCT – ALL
PRIVATE DOMESTIC USE – 12 MONTHS
PRIVATE and COMMERCIAL AGRICULTURAL USE – 12 MONTHS
AGRICULTURAL CONTRACTORS – 6 MONTHS
GOVERNMENT and MUNICIPAL DEPARTMENTS – 6 MONTHS
ALL OTHER NON-AGRICULTURAL APPLICATIONS – 3 MONTHS
HIRE COMPANIES – 3 MONTHS

The warranty period will begin on the date the product is delivered to the first retail purchaser.

THIS WARRANTY COVERS:

- Claims resulting from defects in workmanship or material under normal use and service.

THIS WARRANTY DOES NOT COVER:

- Conditions resulting from misuse, negligence, alteration, accidental damage or failure to perform normal maintenance services;
- Any product which has been repaired by other than an authorised Silvan Australia Pty. Ltd. Service outlet so as, in any way in the sole and absolute judgement of Silvan Australia Pty. Ltd., to affect adversely its performance and reliability;
- The replacement of wear and tear items such as diaphragms, V belts and ground engaging components;
- Loss of time, inconvenience, loss of use of the product or any other consequential damages.

The repair of defective products qualifying under this warranty will be performed by an authorised Silvan Australia Pty. Ltd. Service outlet within a reasonable time following the delivery of the product, at the cost of the owner, to the service outlet's place of business. The product will be repaired or replaced, using new parts sold by Silvan Australia Pty. Ltd.

The owner is responsible for the performance of regular maintenance services as specified in the Operator's Manual applicable to the product.

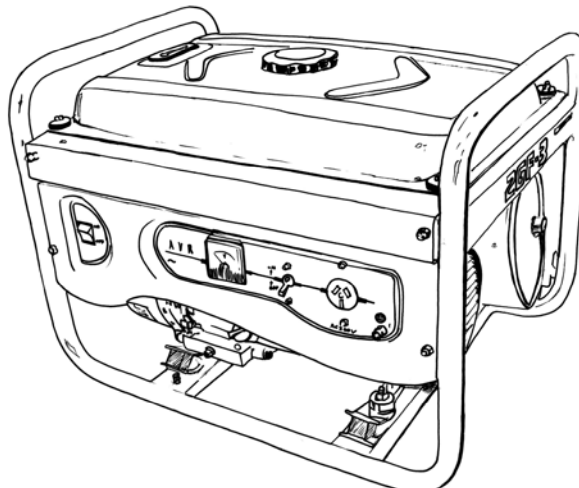
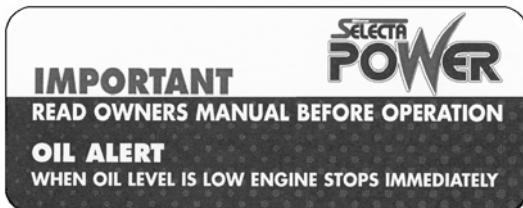
- **THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO SILVAN AUSTRALIA PTY. LTD. NEW PRODUCTS AND, TO THE MAXIMUM EXTENT PERMITTED BY LAW, IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**
- **SILVAN AUSTRALIA PTY. LTD. DOES NOT AUTHORISE ANY PERSON TO CREATE FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH THESE PRODUCTS.**
- **SUBJECT ONLY TO LEGISLATIVE OBLIGATIONS TO THE CONTRARY, SILVAN AUSTRALIA PTY. LTD. SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM A PRODUCT PERFORMING IN BREACH OF THIS WRITTEN WARRANTY.**

Safety Information

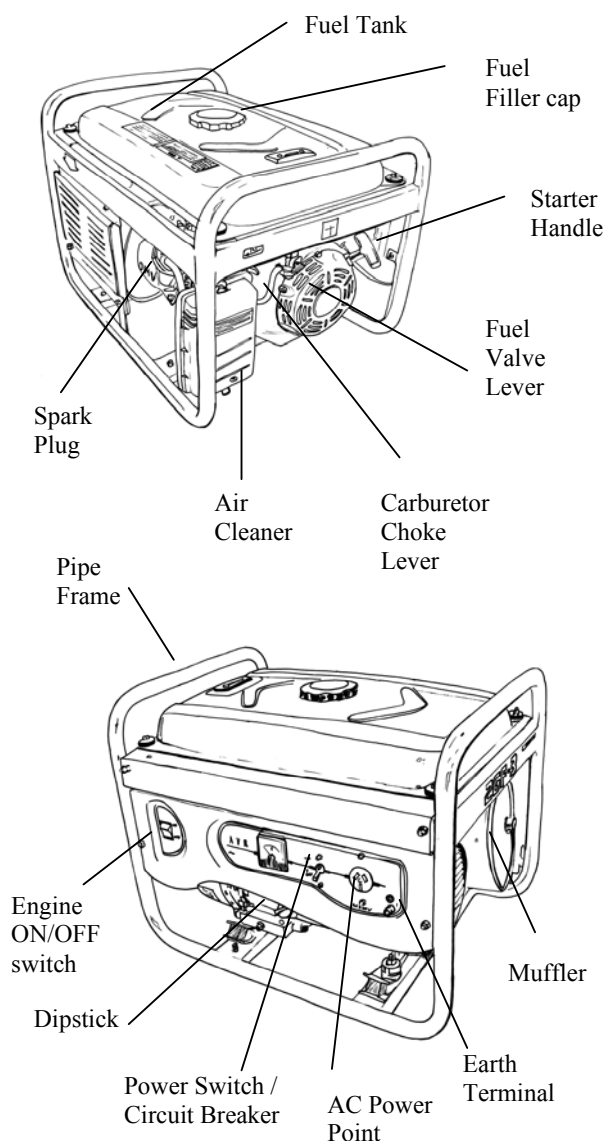


Before operating the engine read the following safety instructions.
Failure to comply with these warnings may result in serious injury or death.
Whilst your engine has been designed and manufactured to incorporate all necessary safety features it is essential that any person who operates or works on the machine is aware of the safety precautions that should be exercised.

- ▲ Before using the generator carefully read and ensure you understand the contents of this manual. Ensure that you are familiar with the starting, operating and stopping procedures.
- ▲ Before using the generator ensure all operators read and follow the safety warning carried on the machine. Refer below for the wording of this warning.
- ▲ Never allow an inadequately trained person to operate the generator
- ▲ Do not operate the generator whilst wearing loose clothing, unrestrained long hair, jewellery or anything which could become entangled in rotating components or limit your vision.
- ▲ Always operate the generator in a well ventilated and well lit area that is free from flammable or other materials that may interfere with its safe operation. Never operate in an enclosed area as engine exhaust fumes contain carbon monoxide, an odourless tasteless asphyxiant, which could cause unconsciousness or death.
- ▲ Always operate on firm and level ground. Uneven or sloping terrain could lead to the engine overturning and spilling fuel.
- ▲ Never leave the generator unattended while the engine is running.
- ▲ Stop the generator before doing any maintenance work.
- ▲ Avoid contact with hot engine parts, which could cause serious burns.
- ▲ Never connect to home, or any other mains power circuit.
- ▲ Do not operate with wet hands or in wet circumstances.
- ▲ Do not operate in pools of water or within 5 metres of river, dam or swimming pool.
- ▲ Always connect the generator to earth using the earth point provided on the control panel, this can be don't by connecting a metal stake into the ground. (not supplied)
- ▲ Keep bystanders, children and animals away from the engine whilst operating.



Specifications



Engine

Model 168F-BV

Single cylinder 163cc 4- stroke OHC single cylinder petrol engine with forced air cooling.

Manual recoil rope start.

Maximum power output 4.0/4000 (kw/rpm)

Noise at 7 meters away <65 dB

Fuel tank capacity 15L Fuel consumption 1.13 L/hr

Operating duration 13 h

Engine oil capacity 0.6 L

Generator

Frequency rating 50 (Hz)

Voltage and power rating 240 V and 2 KVA, max power 2.2 KVA

Overall Dimensions (mm, kg)

Length	Width	Height	Weight
590	434	435	45

Engine Pre-Starting Checks

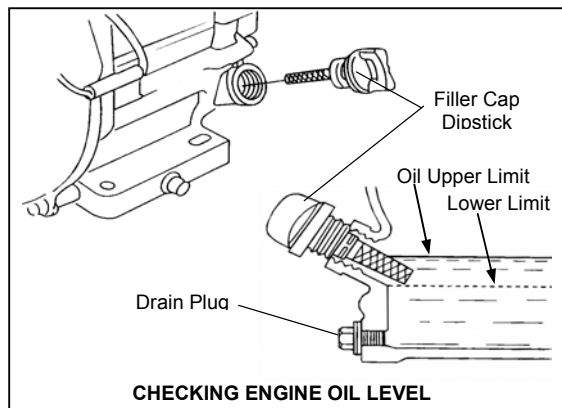
1. Oil Level

Caution: The engine is shipped without oil. It must be filled before starting for the first time.

Check the oil level each time before starting pumping operations. Ensure the check is carried out with the engine stopped and on level ground.

Unscrew the filler cap dipstick and wipe clean. Insert the dipstick into the filler neck and remove it without screwing home. If the oil level is less than half way up the dipstick fill to the edge of the filler neck with high detergent, premium quality SAE 10W-30 engine oil. Refit the filler cap dipstick.

Running the engine with a low oil level can cause serious damage. To safeguard against this the engine is fitted with a 'low oil level' protection system that automatically stops the engine if the oil drops below the safety level. When this occurs the ignition switch remains in the 'on' position. If the engine should stop during operation always first check the oil level before looking for other causes.



2. Fuel Level

Stop the engine before filling the fuel tank. Remove the fuel filler cap and fill the tank with standard grade, unleaded petrol to the bottom of the filler neck. To avoid spillage, do not fill the neck of the tank. The capacity is 15 litres.



WARNING

Petrol is extremely inflammable, and explosive under certain conditions.

Refuel in a well ventilated area with the engine stopped.

Do not allow

smoking, a naked flame or electrical sparks to occur during refilling. Avoid spillage and wipe up spills immediately. Avoid contact with the skin, petrol can burn.

Keep stored petrol out of the reach of children.

3. Air Cleaner

Unclick the air cleaner cover and inspect the filter element. Clean or replace a dirty filter element and always replace a damaged element – see Maintenance section.

Operation

Starting the Generator

Remove all load from the AC power point and switch power switch to the OFF position.

Turn the engine ON/OFF switch ON. Slide the fuel valve lever to the "on" position and close the choke lever. Do not use the choke if the engine is warm or the air temperature is high.

Pull the starter grip gently until resistance is felt, then pull it briskly and the engine should start. Return the starter grip gently, do not allow it to snap back or the starter may be damaged. If the engine does not start repeat the process.

Open the choke fully when the engine is warm and running smoothly.

Stopping the Engine

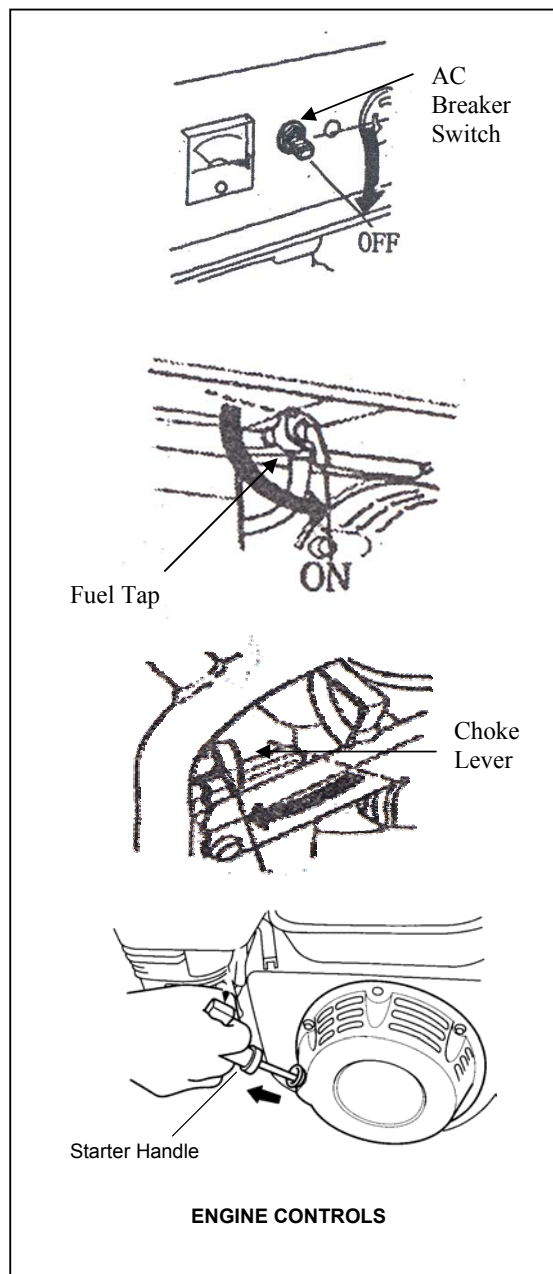
To stop the engine under normal circumstances, switch AC breaker to off position, close the fuel valve and turn the ignition switch off. In an emergency the engine can be quickly stopped by simply turning the ignition switch off.

AC Application

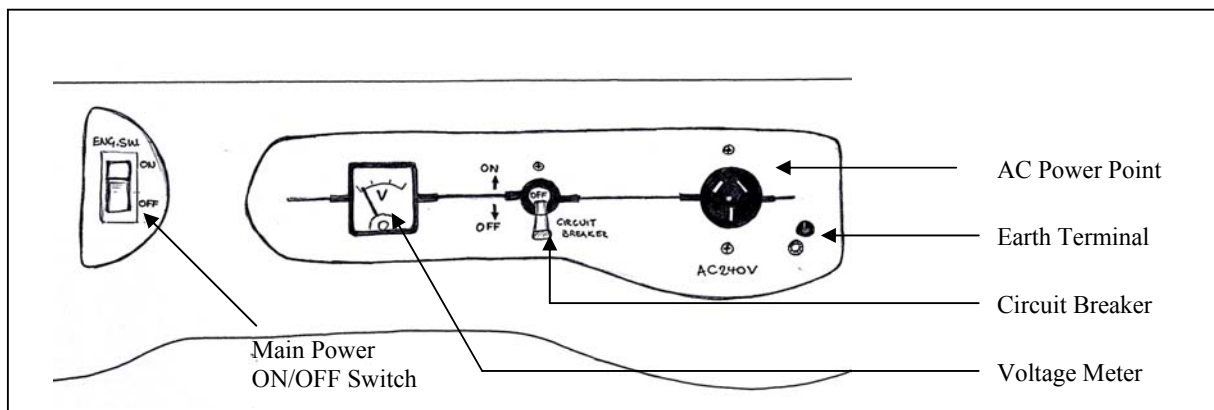
Start engine, ensure AC breaker switch is in the OFF position and the appliance to be connected is turned off.

Connect appliance, and switch AC breaker switch to the ON position.

Now appliance is ready to use.



Control Panel



Lubrication and Maintenance

Maintenance Schedule

Regular maintenance is necessary to ensure optimum performance and extend the service life of the unit. The table below shows the items that require regular maintenance and the frequency at which each should be serviced.

Ensure that the engine is stopped before you begin any maintenance or repairs. This will avoid the possibility of carbon monoxide poisoning from the exhaust fumes. Be sure that there is adequate ventilation whenever you operate the engine.

To avoid burns from hot parts let the engine cool before touching it.

Item \ Frequency		Each time used	First month or 20 hours	Each 3 months or 50 hours	Each 6 months or 100 hours	Each year or 300 hours
Engine oil	Check level	O				
	Change		O		O	
Air cleaner element	Check	O				
	Clean			O(1)		
	Replace					O (2)
Sediment cup	Clean				O	
Spark plug	Clean Adjust				O	
	Replace					O
Idle speed	Adjust					O
Valve clearance	Adjust					O(3)
Combustion chamber	Clean	After every 500 hours (3)				
Fuel tank & strainer	Clean					O(3)
Fuel supply pipe	Check	Every 2 years (replace if necessary) (3)				
(1) Service more frequently in dusty areas. (2) Replace only the paper element. (3) Should be done by a Silvan dealer, unless you have the proper tools and are mechanically proficient.						

Engine Oil Change

Drain the oil when the engine is warm to ensure quick and complete draining.

Place a suitable container beneath the drain plug.

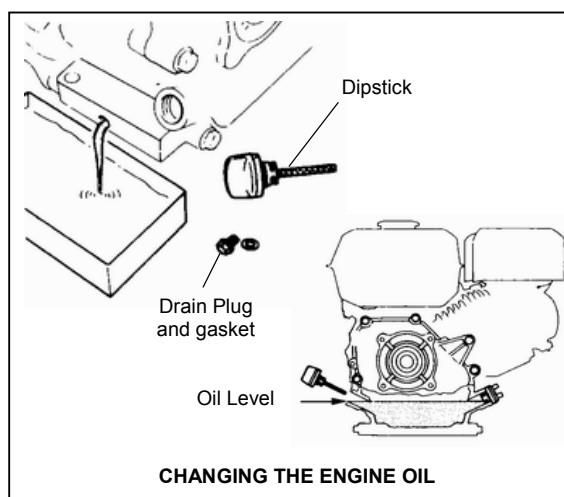
Remove the dipstick and drain plug and allow the oil to drain completely in to the container.

Reinstall the drain plug and tighten securely.

With the engine level, fill the sump through the dipstick opening with premium quality SAE 10W-30 engine oil, until it reaches the upper level mark on the dipstick. Oil capacity is 0.6 litres.

Reinstall the dipstick and tighten.

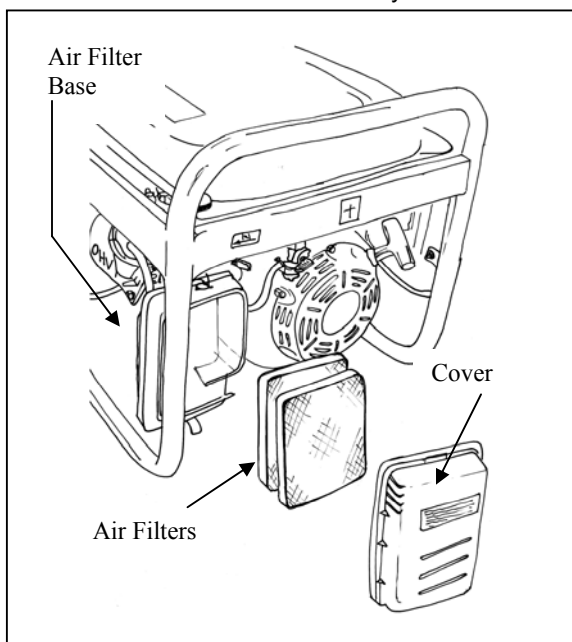
Dispose of the used oil in a manner consistent with protecting the environment. Take it to a service station or recycling depot for proper disposal.



Lubrication and Maintenance

Air Cleaner Service

A dirty filter will restrict air flow to the carburettor and reduce engine power. Operating without the air cleaner fitted or with a damaged filter will allow dirt to enter the engine causing rapid wear, which will not be covered under warranty.



Unclip and remove the air cleaner cover. Unscrew the lower wing nut and remove the filter assembly. Remove the outer foam element from the paper element.

Inspect both elements and replace if damaged. Always replace the paper element at the scheduled service interval. Clean both elements if they are suitable for reuse.

Tap the paper element several times on a hard surface to remove dirt, or blow compressed air not exceeding 200kPa (30 psi) through the element from the inside. Never brush dirt off as this will force dirt into the fibres.

Rinse the foam element in warm soapy water or clean in non-flammable solvent (not petrol) and allow to dry. When dry, dip the element in clean engine oil then squeeze out all excess. The engine will smoke if too much oil is left in the foam.

Clean the interior of the air cleaner cover and base with a moist cloth. Take care to avoid dirt entering the air duct.

Re-install the filter assembly on the air cleaner base, then install the air cleaner cover and lock the clips back into position.

Spark Plug Service

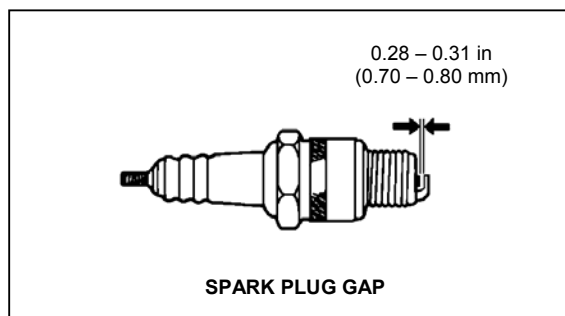
Disconnect the spark plug lead and remove any dirt from around the plug. Remove the plug with a 13/16 inch spark plug wrench.

Inspect the spark plug and clean any carbon from the electrodes with a wire brush. Replace if the electrodes are worn or the insulator is damaged.

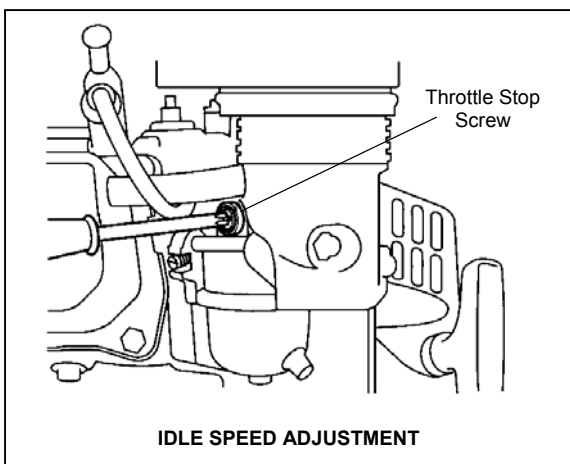
Measure the electrode gap with a spark plug gauge or feelers and adjust as necessary by carefully bending the side electrode - refer diagram below for gap dimension.

Install the plug carefully by hand to avoid cross-threading. Then after it is seated tighten with the spark plug wrench to compress the gasket. If refitting a used plug tighten 1/8 to 1/4 turn after seating or if a new plug 1/2 turn. Refit the spark plug lead.

The recommended plug is NHSP LD F6RTC.



Lubrication and Maintenance



Idle Speed Adjustment

Start the engine outdoors and allow it to warm up to normal operating temperature.

Move the throttle lever to the slowest running position. Then turn the throttle stop screw with a cross head screwdriver to obtain the correct idling speed which is 1400 rpm, +200/-150 rpm.

Preparation for Storage

If storing with petrol in the fuel tank it is important to choose a well ventilated area to reduce the hazard of petrol vaporisation. Avoid areas with a naked flame, such a gas pilot light, or spark-producing electric motors.

Petrol will oxidise and deteriorate in storage, which can leave gum deposits and cause hard starting. The length of time it can be left in the fuel tank before causing problems varies depending upon the petrol blend and storage temperature. The air in a partially filled tank promotes fuel deterioration and this is accelerated by high temperature. For lengthy storage it is best to drain the fuel tank into a suitable container by setting the fuel valve to 'on' and removing the sediment cup and the drain plug from the carburettor. Reinstall the sediment cup and drain plug after draining.

Store the unit in a dry location and cover to protect from dust, etc. Avoid areas of high humidity which promotes corrosion.

Trouble Shooting

Engine will not start

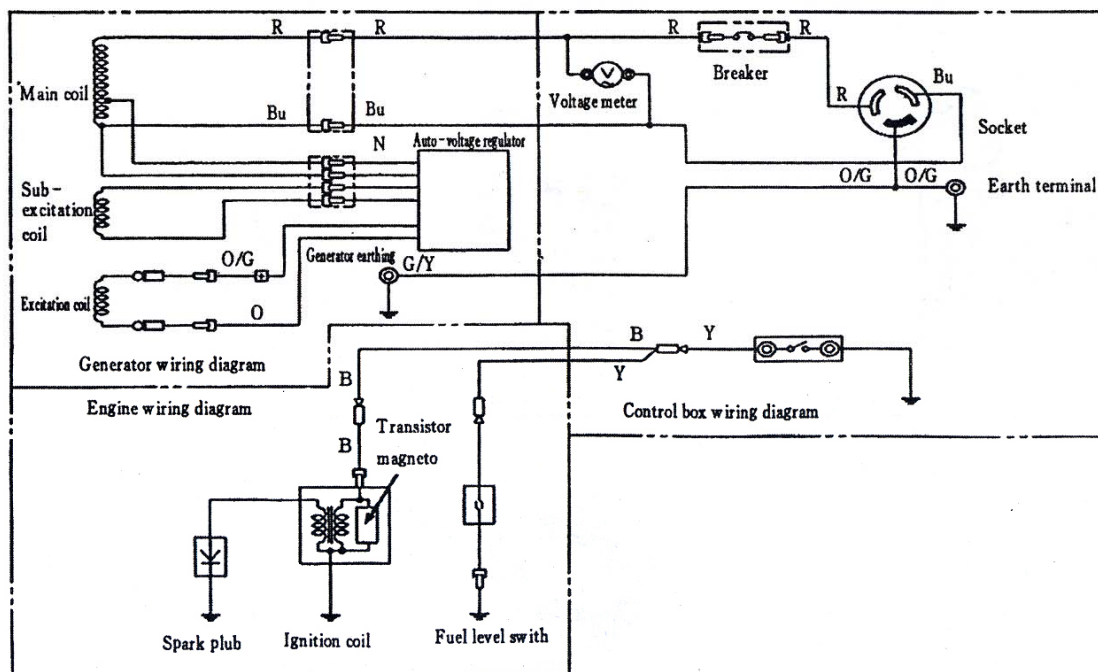
- Check if enough fuel in tank.
- Check if fuel tap is on.
- Check if fuel enters carburettor.
Remove drain plug at bottom of fuel bowl.
- Check that oil level is not too low.
The low oil level protection system may be activated - refer page 5.
- Check that the engine switch is on.
- Check if spark available at spark plug.
- Remove spark plug, reconnect lead, earth plug against engine block, turn engine switch on, pull starter cord and see if spark jumps at plug gap.
- If all above checks are OK and engine will still not start contact your Silvan dealer

Generator fails to generate electricity

- Check to see if the AC breaker is in the on Position
- If all above checks are OK and generator will still not generate electricity contact your Silvan dealer.

Wiring Diagram

Wiring Diagram



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